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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/811,854	<b>Applicant(s)</b> HAN ET AL.	
	<b>Examiner</b> Powen Ru	<b>Art Unit</b> 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 3/30/2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20040330</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This is the initial office action based on the application filed on 3/30/2004. Claims 1-27 are currently pending and have been considered below.

#### ***Specification***

1. The abstract of the disclosure is objected to because the first sentence is not a complete sentence. Applicant may change "including" to "includes" to overcome this objection. Correction is required. See MPEP § 608.01(b).
2. The specification is provisionally objected to because "base" (e.g., [0005], [0020]) is not a conventional terminology to describe low frequency sound. The applicant should change it to "bass" or explain clearly why "base" is used. Appropriate correction is required.

#### ***Claim Objections***

3. Claim 9 and 22 are provisionally objected to because "base speaker" is not a conventional terminology to describe a speaker for producing low frequency sound. The applicant should change it to "bass speaker" or explain clearly why "base speaker" is used. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 23 recites the limitation "first end" and "second end" in line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 24 is rejected under 35 U.S.C. 102(e) as being anticipated by Kuratani et al. (6,956,956). Kuratani et al. discloses a process (col 10 line 65 – col 12 line 50) of assembling a speaker apparatus (speaker system 100, col 6 lines 55-67), having a speaker (woofer 112, col 7 lines 1-5) and a circuit (circuit unit 102, col 7 lines 60-67) to control the speaker, which generates a large amount of heat, comprising: opening an air inlet (air flows into ... openings 113a, col 11 lines 60-67) into the speaker apparatus; opening an air outlet (air flows out ... openings 115a, col 11 lines 60-67) from the speaker apparatus at a higher altitude (Fig. 6) than the inlet; and arranging an air path through the speaker apparatus (convection path C, e.g., col 12 lines 5-15), which is

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proximate to the circuit (col 12 lines 25-30), through which a convection current of air flows to thereby cool the circuit (col 12 line 40).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 8-9, 11-14, 21-22, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuratani et al. (6,956,956) in view of Newman (5,864,100).

Claim 1: Kuratani et al. discloses a speaker apparatus (speaker system 100, col 6 lines 55-67), including a speaker (woofer 112, col 7 lines 1-5), and a circuit (circuit unit 102, col 7 lines 60-67) to operate the speaker, comprising: a casing (speaker box 111, col 7 line 1-15), accommodating the speaker and the circuit (see Fig. 6), to communicate with an outside to dissipate heat (col 7 lines 43-47) from the circuit; and a duct (e.g., bass reflex port 113, col 11 lines 5-15), penetrating the casing (see Fig. 6), to emit back sound of the speaker; but does not specifically disclose a speaker box with an opening to enclose a back of the speaker. However, Newman discloses a speaker box (speaker enclosure 160, col 8 lines 17-20) with an opening (circular opening 163, col 8 lines 20-30) to enclose a back of the speaker (col 8 lines 48-52, see Fig. 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a speaker box to enclose the back of a speaker. As

Newman clearly teaches that the speaker box provides enhanced perception and sound level of bass frequencies (tube speaker, col 1 lines 20-25), one would have been motivated to add Newman's speaker box to Kuratani's speaker apparatus.

Claim 2: Kuratani et al. and Newman disclose a speaker apparatus as in Claim 1; and Kuratani et al. further discloses that the speaker is accommodated in the casing, to leave a space (e.g., interior air space S, col 7 lines 40-41) between the speaker and the casing, and the circuit is accommodated in the casing, being disposed above the speaker box (see Fig. 6).

Claim 3: Kuratani et al. and Newman disclose a speaker apparatus Claim 2; and Kuratani et al. further discloses an upper part and a lower part (e.g., the portions with upper bass reflex port 115 and lower bass reflex port 113, respectively; see Fig. 6), with both parts being opened (openings 113a and 115a, col 11 lines 60-67).

Claim 8: Kuratani et al. and Newman disclose a speaker apparatus as in Claim 1; and Kuratani et al. further discloses an amplifying circuit (power amplifier 133, col 9 lines 5-11) to amplify sound.

Claim 9: Kuratani et al. and Newman disclose a speaker apparatus as in Claim 8; and Kuratani et al. further discloses a bass speaker (woofer 12, col 3 lines 58-60).

Claim 11: Kuratani et al. discloses a speaker apparatus (speaker system 100, col 6 lines 55-67), including a speaker (woofer 112, col 7 lines 1-5), and a circuit (circuit unit 102, col 7 lines 60-67) to operate the speaker, comprising: a casing (speaker box 111, col 7 line 1-15), accommodating the speaker and the circuit (see Fig. 6), having two openings (113a and 115a, col 11 lines 65-67) and a duct hole (e.g., around bass reflex

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port 113 in Fig. 4); and a duct (e.g., bass reflex port 113, col 11 lines 5-15) to emit sound emanating from the speaker, wherein air enters and exits the casing through the two openings and to cool the circuit (e.g., col 12 lines 5-15); but does not specifically disclose a speaker box to enclose a back of the speaker. However, Newman discloses a speaker box (speaker enclosure 160, col 8 lines 17-20) including a hole (circular opening 163, col 8 lines 20-30) to enclose a back of the speaker (col 8 lines 48-52, see Fig. 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a speaker box to enclose the back of a speaker. As Newman clearly teaches that the speaker box provides enhanced perception and sound level of bass frequencies (tube speaker, col 1 lines 20-25), one would have been motivated to add Newman's speaker box to Kuratani's speaker apparatus.

Claim 12: Kuratani et al. and Newman disclose a speaker apparatus as in Claim 11; and Kuratani et al. further discloses a space (e.g., interior air space S, col 7 lines 40-41) between the speaker box and the casing through which the entering and exiting air flows (convection path C, see Fig. 6).

Claim 13: Kuratani et al. and Newman disclose a speaker apparatus as in Claim 12; and Kuratani et al. further discloses that the circuit is disposed above the speaker box in the casing (see Fig. 6).

Claim 14: Kuratani et al. and Newman disclose a speaker apparatus Claim 12; and Kuratani et al. further discloses an upper part and a lower part (e.g., the portions with upper bass reflex port 115 and lower bass reflex port 113, respectively; see Fig. 6)

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of the casing, with first and second openings (openings 113a and 115a, col 11 lines 60-67).

Claim 21: Kuratani et al. and Newman disclose a speaker apparatus as in Claim 11; and Kuratani et al. further discloses an amplifying circuit (power amplifier 133, col 9 lines 5-11) to amplify sound.

Claim 22: Kuratani et al. and Newman disclose a speaker apparatus as in Claim 21; and Kuratani et al. further discloses a bass speaker (woofer 12, col 3 lines 58-60).

Claim 25: Kuratani et al. discloses a process as in Claim 24; and Kuratani et al. further discloses the step of arranging a duct (e.g., bass reflex port 113, col 11 lines 5-15) to extend from inside to an exterior of the speaker apparatus, having a longitudinal axis which is substantially perpendicular to a direction of the convection current (see Fig. 6), to emit back sound of the speaker; but does not disclose a speaker box.

However, Newman discloses a speaker box (speaker enclosure 160, col 8 lines 17-20) with a hole (circular opening 163, col 8 lines 20-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a speaker box to enclose the speaker. As Newman clearly teaches that the speaker box provides enhanced perception and sound level of bass frequencies (tube speaker, col 1 lines 20-25), one would have been motivated to arrange Newman's speaker box in Kuratani's speaker apparatus.

Claim 26: Kuratani et al. discloses a speaker apparatus (speaker system 100, col 6 lines 55-67), including a speaker (woofer 112, col 7 lines 1-5), and a circuit (circuit unit 102, col 7 lines 60-67) to operate the speaker, comprising: a casing (speaker box 111,



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col 7 line 1-15) having two openings (113a and 115a, col 11 lines 65-67) and a duct hole (e.g., around bass reflex port 113 in Fig. 4); a duct (e.g., bass reflex port 113, col 11 lines 5-15), penetrating the duct hole (Fig. 4), to emit sound emanating from the speaker, wherein external air enters and exits the casing through the two openings and circulates therein to cool the circuit (e.g., col 12 lines 5-15); but does not specifically disclose a speaker box to enclose a back of the speaker. However, Newman discloses a speaker box (speaker enclosure 160, col 8 lines 17-20) including a hole (circular opening 163, col 8 lines 20-30) to enclose a back of the speaker (col 8 lines 48-52, see Fig. 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a speaker box to enclose the back of a speaker. As Newman clearly teaches that the speaker box provides enhanced perception and sound level of bass frequencies (tube speaker, col 1 lines 20-25) and the duct hole of the casing can be arranged substantially coaxial with the hole of the speaker box as a portion of the acoustical energy exit (col 8 lines 60-65), one would have been motivated to add Newman's speaker box to Kuratani's speaker apparatus.

Claim 27: Kuratani et al. discloses a speaker apparatus (speaker system 100, col 6 lines 55-67), including a speaker (woofer 112, col 7 lines 1-5), and a circuit (circuit unit 102, col 7 lines 60-67) having fins (134b, col 12 lines 35-40) protruding therefrom (see Fig. 5) to operate the speaker, comprising: a casing (speaker box 111, col 7 line 1-15) having two openings (113a and 115a, col 11 lines 65-67) and a duct hole (e.g., around bass reflex port 113 in Fig. 4); a duct (e.g., bass reflex port 113, col 11 lines 5-15), penetrating the duct hole (Fig. 4), to emit sound emanating from the speaker wherein

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external air enters and exits the casing through the two openings and circulates therein to cool the circuit (e.g., col 12 lines 5-15) by dissipating heat through the fins as the air contacts the fins (col 12 lines 25-48); but does not specifically disclose a speaker box to enclose a back of the speaker; However, Newman discloses a speaker box (speaker enclosure 160, col 8 lines 17-20) including a hole (circular opening 163, col 8 lines 20-30) to enclose a back of the speaker (col 8 lines 48-52, see Fig. 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a speaker box to enclose the back of a speaker. As Newman clearly teaches that the speaker box provides enhanced perception and sound level of bass frequencies (tube speaker, col 1 lines 20-25) and the duct hole of the casing can be arranged substantially coaxial with the hole of the speaker box as a portion of the acoustical energy exit (col 8 lines 60-65), one would have been motivated to add Newman's speaker box to Kuratani's speaker apparatus.

10. Claims 4-7, 10, 15-20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuratani et al. (6,956,956) in view of Newman (5,864,100); and further in view of Zwolski (5,995,634).

Claim 4: Kuratani et al. and Newman disclose a speaker apparatus Claim 3; and Kuratani et al. further discloses a base member (lower bass reflex port 113, col 11 lines 65-67) allowing external air to enter the casing; and a top member provided on the upper part of the casing (upper bass reflex port 115, col 11 lines 60-63; see Fig. 6), allowing air to flow out from the casing; but neither discloses that the base member

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supports the lower part of the casing. However, Zwolski discloses that a base member (sound reflector 42, col 3 lines 25-30) supporting the lower part of the casing (surface 20 provides the base for supporting ..., col 3 lines 45-48). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a base member to support the casing. As Zwolski clearly teaches that the base member is flat and provide a base for supporting the apparatus (col 3 lines 40-45), one would have been motivated to apply Zwolski's base member in Kuratani's speaker apparatus.

Claim 5: Kuratani et al., Newman and Zwolski disclose a speaker apparatus Claim 4; but Kuratani et al. does not specifically disclose the slope orientation of the top/base members. However, Zwolski further discloses that the base member (bottom sound reflector 40, col 3 lines 25-30) slopes upwardly to a center thereof to guide air inflow, and the top member (top sound reflector 40, col 3 lines 25-30) slopes downwardly to a center thereof to guide air outflow (first surface 41 and 43, generally cone-like ... apex ... coincides with the longitudinal axis 70, col 3 lines 25-30; see Fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use such slope structure for speaker apparatuses. As Zwolski teaches that the slopes guide the air flow (redirect, col 3 lines 30-35), one would have been motivated to apply Zwolski's top/base configuration in Kuratani's speaker apparatus.

Claim 6: Kuratani et al., Newman and Zwolski disclose a speaker apparatus Claim 5; but Kuratani et al. does not specifically disclose said supporters. However, Zwolski further discloses a speaker supporter (bottom 22, e.g., col 3 lines 13-17)

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provided between the base member and the lower part of the casing to support the speaker and the lower part of the casing (see Fig. 1); and a top supporter (top 24, e.g., col 3 lines 13-17) provided between the top member and the upper part of the casing so as to support the top member (see Fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use supporters to support other structures in a speaker apparatus. As Zwolski discloses that the speakers can lie within the openings formed in the supporters (col 3 lines 48-51), one would have been motivated to add Zwolski's supporters to Kuratani's speaker apparatus.

Claim 7: Kuratani et al., Newman and Zwolski disclose a speaker apparatus Claim 6; and Kuratani et al. further discloses a control panel (121, col 7 lines 48), which is electrically connected to the circuit and the speaker (Fig. 5-6), is mounted on the casing (Fig. 4).

Claim 10: Kuratani et al. and Newman disclose a speaker apparatus Claim 9; but neither the casing nor the speaker box of Kuratani et al. are cylindrical. However, Zwolski discloses that the casing (base member 12, col 2 lines 65-67) is shaped like a cylinder (Fig. 1) having opposite openings (opening in the top 24 and opening in the bottom 22, col 3 lines 50-55) and Newman further discloses that the speaker box is shaped like a cylinder (Fig. 7) having one opening (outside open end 168b, col 8 lines 43-48). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply cylindrical casings, cylindrical speaker boxes, and other openings. As Newman clearly teaches that the cylindrical enclosure provides enhanced perception and sound level of bass frequencies (tube speaker, col 1 lines 20-

25), one would have been motivated to shape the casing and the speaker box of the speaker apparatus like cylinders.

Claim 15: Kuratani et al. and Newman disclose a speaker apparatus Claim 14; and Kuratani et al. further discloses a base member (lower bass reflex port 113, col 11 lines 65-67) allowing external air to enter the casing; but neither discloses that the base member supports the lower part of the casing. However, Zwolski discloses that a base member (sound reflector 42, col 3 lines 25-30) supporting the lower part of the casing (surface 20 provides the base for supporting ..., col 3 lines 45-48). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a base member to support the casing. As Zwolski clearly teaches that the base member is flat and provide a base for supporting the apparatus (col 3 lines 40-45), one would have been motivated to apply Zwolski's base member in Kuratani's speaker apparatus.

Claim 16: Kuratani et al., Newman and Zwolski disclose a speaker apparatus Claim 15; and Kuratani et al. further discloses a top member on the upper part of the casing (upper bass reflex port 115, col 11 lines 60-63; see Fig. 6) to allow air to flow out from the casing.

Claim 17: Kuratani et al., Newman and Zwolski disclose a speaker apparatus Claim 16; but Kuratani et al. does not specifically disclose the slope orientation of the top/base members. However, Zwolski further discloses that the base member (bottom sound reflector 40, col 3 lines 25-30) and the top member (top sound reflector 40, col 3 lines 25-30) each comprise a center (apex ... coincides with the longitudinal axis 70, col

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3 lines 25-30), wherein the base member slopes upwardly toward the center of the base member and the top member slopes downwardly toward the center of the top member (see Fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use such slope structure for speaker apparatuses. As Zwolski teaches that the slopes guide the air flow (redirect, col 3 lines 30-35), one would have been motivated to apply Zwolski's top/base configuration in Kuratani's speaker apparatus.

Claim 18: Kuratani et al., Newman and Zwolski disclose a speaker apparatus Claim 17; but Kuratani et al. does not specifically disclose a speaker supporter between the lower part of the casing and the base member. However, Zwolski further discloses a speaker supporter (bottom 22, e.g., col 3 lines 13-17) provided between the base member and the lower part of the casing to support the speaker and the lower part of the casing (see Fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use supporters to support other structures in a speaker apparatus. As Zwolski discloses that the speakers can lie within the openings formed in the supporter (col 3 lines 48-51), one would have been motivated to add Zwolski's speaker supporter to Kuratani's speaker apparatus.

Claim 19: Kuratani et al., Newman and Zwolski disclose a speaker apparatus Claim 18; but Kuratani et al. does not specifically disclose a top supporter provided between the top member and the upper part of the casing. However, Zwolski further discloses a top supporter (top 24, e.g., col 3 lines 13-17) provided between the top member and the upper part of the casing so as to support the top member (see Fig. 1).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a top supporter. As Zwolski discloses that the top supporter supports other structures (column supports 52, col 3 line 10-15), one would have been motivated to add Zwolski's top supporter to Kuratani's speaker apparatus.

Claim 20: Kuratani et al., Newman and Zwolski disclose a speaker apparatus Claim 19; and Kuratani et al. further discloses a control panel (121, col 7 lines 48), mounted on the casing (Fig. 4), which is electrically connected to the circuit and the speaker (Fig. 5-6).

Claim 23: Kuratani et al. and Newman disclose a speaker apparatus Claim 22; and Kuratani et al. further discloses that the casing stands with the one end lower than the other (Fig. 6), wherein the first and second openings (openings 113a and 115a, col 11 lines 60-67) are located at first and second ends, respectively; but neither discloses that the casing is cylindrical. However, Zwolski discloses that the casing (base member 12, col 2 lines 65-67) is cylindrical (Fig. 1) having opposite openings (opening in the top 24 and opening in the bottom 22, col 3 lines 50-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply cylindrical casing in a speaker apparatus. As Newman clearly teaches that the cylindrical enclosure provides enhanced perception and sound level of bass frequencies (tube speaker, col 1 lines 20-25), one would have been motivated to alter Kuratani's casing to Zwolski's cylindrical design.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Froeschle (5,025,885) discloses a multiple chamber loudspeaker system with a duct penetrating a speaker box and a casing; and Jordan et al. (5,097,513) discloses a speaker system enclosure integrated with amplifier circuit board and heat dissipating means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Powen Ru whose telephone number is 571-270-1050. The examiner can normally be reached on Monday-Thursday 7:30am-3:30pm EST/EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on 571-270-1065. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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9/13/2006

  
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